

What is Claimed is:

1. A biopsy instrument for retrieving body tissue, having a longitudinal axis and comprising:

a distal end adapted for entry into a patient's body; and

5 a cutting element disposed on said instrument, said cutting element being actuatable between a radially retracted position and a radially extended position, relative to said axis, and being movable in said radially extended position to isolate a desired tissue specimen from surrounding tissue by defining a peripheral margin about said tissue specimen.

10 2. The biopsy instrument as recited in Claim 1, wherein said cutting element is rotatable about said axis in said radially extended position to isolate said desired tissue specimen.

15 3. The biopsy instrument as recited in Claim 1, wherein said cutting element is movable axially in said radially extended position to isolate said desired tissue specimen.

4. The biopsy instrument as recited in Claim 1, said distal end comprising an electrosurgical cutting element for cutting tissue and facilitating advancement of said instrument into the patient's body.

5. The biopsy instrument as recited in Claim 2, and further comprising a shaft disposed along said axis.

6. The biopsy instrument as recited in Claim 5, wherein said cutting element

comprises an electrosurgical cutting element.

7. The biopsy instrument as recited in Claim 5, said instrument comprising a monopolar instrument wherein the electrosurgical cutting element comprises an active electrode thereof.
8. The biopsy instrument as recited in Claim 5, said instrument comprising a bipolar instrument wherein the electrosurgical cutting element comprises an active electrode thereof.
9. The biopsy instrument as recited in Claim 8, wherein a portion of said shaft comprises a return electrode of the bipolar instrument.
10. The biopsy instrument as recited in Claim 5, and further comprising a sheath which is axially movable between distal and proximal positions for selectively covering and uncovering the cutting element.
11. The biopsy instrument as recited in Claim 10, and further comprising a proximal driver unit for controlling radial expansion and retraction of said cutting element and rotation of said cutting element about said axis.
12. The biopsy instrument as recited in Claim 11, wherein the proximal driver unit further controls axial movement of said shaft and axial movement of said sheath.
13. The biopsy instrument as recited in Claim 5, wherein said cutting element

may be manipulated to segment said tissue specimen after it has been isolated from the surrounding tissue.

14. The biopsy instrument as recited in Claim 13, wherein said cutting element segments said tissue specimen as it is being retracted from said radially extended position to said radially retracted position.

15. The biopsy instrument as recited in Claim 14, wherein said radially extended position comprises a first radially extended position, and said cutting element is further actuatable to a plurality of additional radially extended positions, said cutting element being rotatable about said axis in each of said radially extended positions to selectively peripherally segment said tissue specimen.

16. The biopsy instrument as recited in Claim 13, and further comprising a cannula having a lumen for providing a passageway into the patient's body, the segments of said tissue specimen being removable from the patient's body through said cannula.

17. The biopsy instrument as recited in Claim 5, wherein said instrument further comprises an element for encapsulating said tissue specimen so that it may be withdrawn as a single unit from the patient's body.

18. The biopsy instrument as recited in Claim 17, wherein said encapsulating element comprises a band disposed along said shaft, said band being actuatable between a radially retracted position and a radially extended position.

19. The biopsy instrument as recited in Claim 17, wherein said encapsulating element comprises a plurality of bands disposed along said shaft, each of said bands

being actuatable between a radially retracted position and a radially extended position.

20. The biopsy instrument as recited in Claim 19, wherein said cutting element comprises one of said encapsulating elements.

21. An instrument for retrieving body tissue, having a longitudinal axis and comprising:

a distal end adapted for entry into a patient's body; and
an element for encapsulating a tissue specimen so that it may be withdrawn as a
5 single unit from the patient's body.

22. The instrument as recited in Claim 21, wherein said encapsulating element comprises an axially disposed band, said band being actuatable between a radially retracted position and a radially extended position.

23. The biopsy instrument as recited in Claim 21, wherein said encapsulating element comprises a plurality of bands disposed along said axis, each of said bands being actuatable between a radially retracted position and a radially extended position.

24. The biopsy instrument as recited in Claim 23, wherein said instrument is rotatable about said axis in order that said bands may be twisted for encapsulating said tissue specimen.

25. The biopsy instrument as recited in Claim 21, and further comprising an axially disposed cutting element, the cutting element being actuatable between a radially retracted position and a radially extended position, and being rotatable about said axis in said radially extended position to isolate a desired tissue specimen from surrounding

tissue by defining a peripheral margin about said tissue specimen.

26. The biopsy instrument as recited in Claim 25, wherein said cutting element comprises an electrosurgical cutting element.

27. The biopsy instrument as recited in Claim 21, and further comprising a sheath which is axially movable between distal and proximal positions for selectively covering and uncovering the encapsulating element.

28. The biopsy instrument as recited in Claim 21, and further comprising a cutting element which is actuatable to cut tissue as said instrument is proximally withdrawn from said patient's body with said encapsulated intact tissue specimen.

29. A method for retrieving a tissue specimen from a patient's body, comprising the steps of:

inserting an instrument having a distal end, a longitudinal axis, and an axially disposed cutting element into the patient's body, so that the distal end is disposed in a tissue region from which the tissue specimen is to be taken;

5 radially extending said cutting element so that a portion thereof is radially outwardly spaced from the axis of said instrument; and

rotating said cutting element about said axis to cut said tissue and create a peripheral boundary about said tissue specimen, to isolate the tissue specimen from 10 surrounding tissue in the tissue region.

30. The method as recited in Claim 29, and further comprising the step of encapsulating said tissue specimen.

31. The method as recited in Claim 30, wherein the encapsulating step includes the step of radially expanding at least one encapsulating element so that a portion thereof is radially outwardly spaced from the axis of said instrument and rotating said instrument about its axis so that said at least one encapsulating element encloses said tissue specimen.

32. The method as recited in Claim 31, wherein said at least one encapsulating element comprises a plurality of bands which are disposed axially along said instrument.

33. The method as recited in Claim 30, and further comprising the step of proximally withdrawing said instrument, with the encapsulated tissue specimen, from the patient's body, said step including the step of cutting tissue as the instrument is withdrawn.

34. The method as recited in Claim 29, and further comprising the step of segmenting said tissue specimen.

35. The method as recited in Claim 34, and further comprising the step of withdrawing each segment of said tissue specimen through a cannula lumen.

36. The method as recited in Claim 34, wherein the step of segmenting said tissue specimen includes the step of radially retracting said cutting element so that the tissue specimen is segmented radially.

37. The method as recited in Claim 34, wherein the step of segmenting said tissue specimen includes the steps of partially radially retracting said cutting element

from its fully radially expanded position and rotating the instrument about its axis to cut said tissue and create a circumferential tissue segment.

38. The method as recited in Claim 37, wherein the segmenting step is repeated at differing partially radially expanded positions of the cutting element, so that a plurality of circumferential tissue segments are created.

39. The method as recited in Claim 29, and further comprising the step of simultaneously moving the cutting element axially as it is rotated about said axis to cut said tissue.